

### **REMARKS/ARGUMENTS**

The applicants' attorneys appreciate the Examiner's thorough search and remarks.

Claims 1, 3, 4 and 5 have been amended to better set out the subject matter thereof. Entry of the amendments is requested.

Claim 1 has been rejected under 35 U.S.C. §103(a) as obvious over Murakami et al., U.S. Patent No. 5,552,625. (Murakami), in view of Fuse et al., U.S. Patent No. 5,466,612 (Fuse) and in further view of Pike et al., U.S. Patent No. 5,283,202 (Pike). Reconsideration is requested.

It has been stated that Murakami and Fuse teach all of the limitations of claim 1, except for evaporating platinum on the back surface of the die and heating the die to drive the platinum atoms into the die, but that Pike teaches such a limitation.

Pike, however, teaches diffusing platinum atoms for lifetime killing in an IGBT. There is no mention of platinum diffusion to improve the recovery time of a diode. Furthermore, Pike does not teach or suggest when in a process for manufacturing a fast recovery diode platinum atoms can be diffused. Whereas, claim 1 calls for evaporating the platinum atoms onto the back of the die after the second mask, but before the deposition of anode contact. This specific sequence of steps is not taught or suggested by the art of record.

It is a well established principle that a claim must be considered in its entirety, rather than broken into individual limitations and then examined piece by piece. Claim 1 is directed at a process for manufacturing a fast recovery diode, which includes the diffusion of platinum atoms through a back surface of the die. The prior art does not teach or suggest such a step for manufacturing a fast recovery diode. Furthermore, and most importantly, the prior art does not teach or suggest the precise sequence of steps for the manufacture of such a device. Specifically, the prior art fails to teach evaporating platinum onto the back surface of the die and diffusing the same after the second masking step. Because the prior art fails to teach the subject matter of claim 1 as a whole, it is submitted that claim 1 should not be considered obvious over the same. Reconsideration is requested.

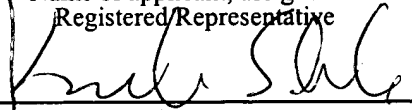
It is acknowledged with appreciation that claim 3 has been deemed allowable if written in independent form. Accordingly, claim 3 is submitted in independent form as claim 6. Confirmation of allowability of claim 3 is requested.

The application is believed to be in condition for allowance. Such action is earnestly solicited.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on December 13, 2004:

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Name of applicant, assignee or  
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Signature

December 13, 2004

Date of Signature

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